

SEQUENCE LISTING

<110> Ma, Hong

<120> Plant Gene Required for Male Meiosis

<130> 99-2205/13291-00000

<150> 60/193523

<151> 2000-03-31

<160> 7

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 2144

<212> DNA

<213> Arabidopsis thaliana

<400> 1

```

actgcatcag cccactctct agtctctgac taacgaactt ccattttcaa aattcgaatt 60
tctaatttct agtttcaagc tttcgtacgg agaaaaaatg aaggagatcg cgatgaggaa 120
ttcaaagcgc aagcctgagc cgacgccgtt cgccgggaag aagctccggt cgacgcgatt 180
acgccggaag agagcacaga tctctcccgt tcttgttcaa tcacctctct ggagcaaaca 240
aatcgagtc tctgctgctt ctgctgattc ctgctccgat ttgctagctg atgacaacgt 300
ttcctgtggt tcgagcagag tcgagaagag ctccaatccg aagaagactc taattgaaga 360
ggtagaagtt tctaaacctg gttataatgt gaaggagacg attggtgatt cgaaatttcg 420
aaggattacg aggtcttact ctaagctaca caaggagaag gagggagatg agatcgaagt 480
aagcgaatcg tcttggtgtt attcgaattc tgggtgctgga ttaaggagat tgaatgtgaa 540
gggaaataaa attaacgaca acgatgagat ctctttctca cgatccgatg tgaccttcgc 600
cggacatgtc tccaacagcc ggagtttgaa tttcgaatcg gagaataagg agagcgacgt 660
cgtttctgtc atatctggag ttgagtactg ttccaagttc gggagcgtta ccggaggagc 720
tgataacgaa gaaattgaaa tctccaagcc gagcagcttc gtggaagctg attcctctct 780
tggatcggcc aaggaattga agccggagct tgagatagtc ggatgctctc ctgatctcgc 840
ttgctctgag aaattctcgg aagaggtttc ggattctctc gatgatgagt catctgagca 900
acgttcagag atatattcac agtattccga cttcgattac tcggattaca ctccgtccat 960
cttcttcgac tctggcagcg aattctctga gaaatcttcc tctgattctc ctatttcaca 1020
ttctcgctct ctgtacctcc agttcaagga acagttctgt agatccacga ttccaacga 1080
ttttggatct tcttgcgagg aagaaattca ctctgaattg ctaaggtttg atgatgagga 1140
ggtggaagag agctatctaa ggctgaggga aagagaaaga agtcatgcat atatgcggga 1200
ctgtgctaag gcatactgct ccaggatgga caatactggt ctcacctc gtctacgctc 1260
catcatggtt caatggattg taaagcaatg ttctgacatg gggcttcagc aagagacatt 1320
gtttctagga gttggtctgt tggatcgatt cctgagcaaa ggatcattca aaagcgaaag 1380
gactctaata ctagtcggga ttgagagctt tactctggcc accagaattg aagaaaatca 1440
accttacaac agcatccgga aaaggaactt caccattcag aacctaaagt atagccggca 1500
tgaagtgttg gcaatggagt ggctggttca agaagtcctc aacttcaa atgttcacacc 1560
cacaatcttc aacttcttgt ggttctactt aaaagctgct cgagccaatc cagaagttga 1620
aaggaaagcc aaatccttgg ctgttacctc actatccgac caaactcaac tctgtttttg 1680
gccctcaact gtagcagctg cactcgtggt tctcgctgc atcgaaaca acaaaatctc 1740
tgcataccaa cgagtcataa aggtccatgt tagaacaaca gataacgagt tgcctgaatg 1800
cgttaagagt ctggactggt tgcttgaggc gtaagcaatc aaaaagaaca aaaaccctaa 1860
aaccaggaca cagtatactc cgataccaac acacaggtta tcattactat ttacaaaaaa 1920
aaacacaagg taagtaataa gaactcctct acagatttat atacttaatc gagctggact 1980
taattagctc ttagtatacc aattattagt gccaccattt gtgtcgctca tacacattta 2040
tttcttattt tccctaattc attagactct catattctta aaaagaatat ttccttggtt 2100
gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 2144

```

<210> 2

<211> 578
 <212> PRT
 <213> Arabidopsis thaliana

<400> 2

Met	Lys	Glu	Ile	Ala	Met	Arg	Asn	Ser	Lys	Arg	Lys	Pro	Glu	Pro	Thr
1				5					10					15	
Pro	Phe	Ala	Gly	Lys	Lys	Leu	Arg	Ser	Thr	Arg	Leu	Arg	Arg	Lys	Arg
		20						25					30		
Ala	Gln	Ile	Ser	Pro	Val	Leu	Val	Gln	Ser	Pro	Leu	Trp	Ser	Lys	Gln
	35					40						45			
Ile	Gly	Val	Ser	Ala	Ala	Ser	Val	Asp	Ser	Cys	Ser	Asp	Leu	Leu	Ala
50					55					60					
Asp	Asp	Asn	Val	Ser	Cys	Gly	Ser	Ser	Arg	Val	Glu	Lys	Ser	Ser	Asn
65				70					75						80
Pro	Lys	Lys	Thr	Leu	Ile	Glu	Glu	Val	Glu	Val	Ser	Lys	Pro	Gly	Tyr
			85					90						95	
Asn	Val	Lys	Glu	Thr	Ile	Gly	Asp	Ser	Lys	Phe	Arg	Arg	Ile	Thr	Arg
		100					105						110		
Ser	Tyr	Ser	Lys	Leu	His	Lys	Glu	Lys	Glu	Gly	Asp	Glu	Ile	Glu	Val
	115					120						125			
Ser	Glu	Ser	Ser	Cys	Val	Asp	Ser	Asn	Ser	Gly	Ala	Gly	Leu	Arg	Arg
130					135						140				
Leu	Asn	Val	Lys	Gly	Asn	Lys	Ile	Asn	Asp	Asn	Asp	Glu	Ile	Ser	Phe
145				150					155						160
Ser	Arg	Ser	Asp	Val	Thr	Phe	Ala	Gly	His	Val	Ser	Asn	Ser	Arg	Ser
			165					170						175	
Leu	Asn	Phe	Glu	Ser	Glu	Asn	Lys	Glu	Ser	Asp	Val	Val	Ser	Val	Ile
		180					185					190			
Ser	Gly	Val	Glu	Tyr	Cys	Ser	Lys	Phe	Gly	Ser	Val	Thr	Gly	Gly	Ala
	195					200						205			
Asp	Asn	Glu	Glu	Ile	Glu	Ile	Ser	Lys	Pro	Ser	Ser	Phe	Val	Glu	Ala
210					215						220				
Asp	Ser	Ser	Leu	Gly	Ser	Ala	Lys	Glu	Leu	Lys	Pro	Glu	Leu	Glu	Ile
225				230					235						240
Val	Gly	Cys	Val	Ser	Asp	Leu	Ala	Cys	Ser	Glu	Lys	Phe	Ser	Glu	Glu
			245					250						255	
Val	Ser	Asp	Ser	Leu	Asp	Asp	Glu	Ser	Ser	Glu	Gln	Arg	Ser	Glu	Ile
		260					265						270		
Tyr	Ser	Gln	Tyr	Ser	Asp	Phe	Asp	Tyr	Ser	Asp	Tyr	Thr	Pro	Ser	Ile
	275					280						285			
Phe	Phe	Asp	Ser	Gly	Ser	Glu	Phe	Ser	Glu	Lys	Ser	Ser	Ser	Asp	Ser
290					295						300				
Pro	Ile	Ser	His	Ser	Arg	Ser	Leu	Tyr	Leu	Gln	Phe	Lys	Glu	Gln	Phe
305				310					315						320
Cys	Arg	Ser	Thr	Ile	Pro	Asn	Asp	Phe	Gly	Ser	Ser	Cys	Glu	Glu	Glu
			325					330						335	
Ile	His	Ser	Glu	Leu	Leu	Arg	Phe	Asp	Asp	Glu	Glu	Val	Glu	Glu	Ser
		340					345						350		
Tyr	Leu	Arg	Leu	Arg	Glu	Arg	Glu	Arg	Ser	His	Ala	Tyr	Met	Arg	Asp
	355					360						365			
Cys	Ala	Lys	Ala	Tyr	Cys	Ser	Arg	Met	Asp	Asn	Thr	Gly	Leu	Ile	Pro
370					375						380				
Arg	Leu	Arg	Ser	Ile	Met	Val	Gln	Trp	Ile	Val	Lys	Gln	Cys	Ser	Asp
385				390					395						400
Met	Gly	Leu	Gln	Gln	Glu	Thr	Leu	Phe	Leu	Gly	Val	Gly	Leu	Leu	Asp
			405					410						415	
Arg	Phe	Leu	Ser	Lys	Gly	Ser	Phe	Lys	Ser	Glu	Arg	Thr	Leu	Ile	Leu
		420					425						430		
Val	Gly	Ile	Ala	Ser	Leu	Thr	Leu	Ala	Thr	Arg	Ile	Glu	Glu	Asn	Gln
	435						440					445			

protein data bank

Pro	Tyr	Asn	Ser	Ile	Arg	Lys	Arg	Asn	Phe	Thr	Ile	Gln	Asn	Leu	Arg
450						455					460				
Tyr	Ser	Arg	His	Glu	Val	Val	Ala	Met	Glu	Trp	Leu	Val	Gln	Glu	Val
465					470					475				480	
Leu	Asn	Phe	Lys	Cys	Phe	Thr	Pro	Thr	Ile	Phe	Asn	Phe	Leu	Trp	Phe
			485						490				495		
Tyr	Leu	Lys	Ala	Ala	Arg	Ala	Asn	Pro	Glu	Val	Glu	Arg	Lys	Ala	Lys
			500					505					510		
Ser	Leu	Ala	Val	Thr	Ser	Leu	Ser	Asp	Gln	Thr	Gln	Leu	Cys	Phe	Trp
		515					520				525				
Pro	Ser	Thr	Val	Ala	Ala	Ala	Leu	Val	Val	Leu	Ala	Cys	Ile	Glu	His
530						535					540				
Asn	Lys	Ile	Ser	Ala	Tyr	Gln	Arg	Val	Ile	Lys	Val	His	Val	Arg	Thr
545					550					555				560	
Thr	Asp	Asn	Glu	Leu	Pro	Glu	Cys	Val	Lys	Ser	Leu	Asp	Trp	Leu	Leu
			565					570					575		

Gly Gln

<210> 3
 <211> 3018
 <212> DNA
 <213> Arabidopsis thaliana

<400> 3
 gtcgaccaga gtttgaccaa tgactaatgt tatcgatatga ttcaattatt ttttgtacag 60
 taatgtctcg tagaccgaca acaagaccag aaagtaatct taaaacccta gcttcacact 120
 tagatatgtt tctatacatg tgtgtatata tacacacata cttgtagagc atgtgagaca 180
 gtgaaattta ctagtggttaa acatggatgt gaagaaagat gagaacagta tcttagaaaa 240
 catgaaacaa gagattaatc atagtctaaa agaagaagca caagaagaag aagagattct 300
 aaagaagaga atctcaagcc acccttttga tgggcttctt cttcactcac atctcaattg 360
 tttaaaggta cccctcttaa tgcttccctc tctctctttt ttattaaagt gatgtatgag 420
 tataaatgtt tatctcttat gtatttggac ccaaccacga ccaggtgtgt tccggcgact 480
 ttgactcacc ggagatcatg aacacggctg atgatcttgc cctatccaaa ctctctctcc 540
 accctgactc ttccctccgaa gctacctctt cagaacttga tcaattcatg gttctttttt 600
 ttttttctcc ctgccaaaac atattttacac aacaaaaaac aacttttcac gttcttttat 660
 tttttccttt gcaaattaat ttgactttca agtattctaa gtttattttg ccaagaaaaa 720
 aacagtagca cttatacttg taaattgatt cacataatag gaagcgtatt gctcgactct 780
 acgggagctc aaggaagcaa tggagaagcc tcttaccgaa acgcatcggt ttgtggatgc 840
 ggtgtacact cagctaaacg acatcggtat gtcacacccc ccttaaaaaa gggtaacatg 900
 acaactgtt cgggtgctact atgtcaatgc attttgccaa attactactc agtctactca 960
 cgatttattg tactgcgttt acgtaacgag tttgtatgat cgtttatttg taaccgtaat 1020
 ttatggcatg ccctcctgct tttttattta agaaaaataa aactaattat attgtaaaata 1080
 ttgcattgat catttagtca cactctttag aaaacaacag taaaatttaa atataaaaaa 1140
 aacactagct tccatgatta tttttcataa ccatttataa ttgcgctatc ttgtaagttg 1200
 taacgcattg cctttcttac tatgtaacgg ttgttgcata tttttgtgta cataaattta 1260
 tacacaaaaga taaaaagtga ctaagcttaa aatatccttg aaaaagcctt tgggtcatta 1320
 acatgggtga agactacagg cgcattcagc aattggagtt ccgattctat tacagtaaga 1380
 gggaacagaa ccgtaataat cgcgacacat ttgttcgcat ttgttagcat cgcattggaac 1440
 cattggccag aaaacggggc aagtttggtc catcattctc gtctctctcg cacctttaaa 1500
 caaacatcag aaaatttggtg acattaatta acaggatttg gcttcttata aagataagat 1560
 taaaactact atttaaaaga taatctgtac ctgaggctga aacgatgaag atgggtcatga 1620
 taagaacagc gaaatttatg aggtttctca tgggttttatg tttttttttt tcttaacaaa 1680
 gacgtaaaact tgaatcggtt tatatgcgaa attgacagag aaaaccggaa aagataggat 1740
 ctctttttct ttctttcttt tagtgaaaata gatgataaac ttgtttctgc taaaagaggt 1800
 gtttattttg gaaattatga attttctggt caatgtgatc ttagaatttt aaataggctg 1860
 gattttgtga cctgattccg tgtcttatat ctgtatttac tatatttaga tgattctctg 1920
 ataactgatg ttttaaaaag aagataattt tgataaagaa gtgattacga actttccaac 1980
 attaaaagtt tagagtttat ttgattttat atctaattct ggttttatatg tttttgatgg 2040
 ggtttactaa ttatattata ccattcaagt tgaaatatat acaagttttt tttgttttat 2100

bioRxiv preprint doi: <https://doi.org/10.1101/000000>; this version posted January 1, 2015. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.

cctaataatc	tctaattgtga	tatatataat	atataatttg	gatcggattc	aaccaaacca	2160
tgaacgagat	ttacattttg	cogttttccg	aaatgttttg	ggcttcgtaa	agaactaaag	2220
gtgatattta	gatattgggt	atactatttg	ttgtattggg	cttaaaaagt	tacttttttg	2280
gccccaaatt	aatcaactaa	aataagatca	ccaatggaaa	aagaaacaaa	aaaaccagta	2340
aaacatatgc	agaaaatgta	aatttacagg	gcctaataata	atctgcttga	ccatgccatt	2400
gcgacataac	aaatgttaca	caagtagtgt	acctataaag	tagtgtacct	ataatatatt	2460
aacagtgtac	aatttcagtg	tataaaaaaa	gtcttcttaa	atcatctttt	aattccaaca	2520
atatgacatt	cacaaactta	tctatgattt	ttttaaaaaa	aaattcacac	gtgtgctcaa	2580
tttatgtttc	tttttagttc	tccacgtgat	ttgatgcaag	aaaaatgatt	agactgtatg	2640
ttaaaaagca	tactagagaa	attaattata	aaacatcaat	cagttgaagt	aattatcaaa	2700
accgcatgct	tttttagcta	aatctgtgat	tgtactgacg	cagatgcata	aattcaaacy	2760
caaacgctga	tctctacatt	agccaaacaa	gaatagcgct	caaatttacg	actggtttca	2820
cgtgcaccaa	accgtagggt	ataatatctc	tctctcactc	tccaacatcc	ccactcttcc	2880
caagaaactt	ctataactgc	atcagcccac	tctctagtct	ctgactaacg	aacttccatt	2940
ttcaaaattc	gaattttctaa	tttctagttt	caagctttcg	tacggagaaa	aaatgaagga	3000
gatcgcgatg	aggaatttc					3018

<210> 4

<211> 3970

<212> DNA

<213> Arabidopsis thaliana

<400> 4

ttgaccatgc	cattgcgaca	taacaaatgt	tacacaagta	gtgtacctat	aaagtagtgt	60
acctataata	tattaacagt	gatcaatttc	agtgtataaa	aaaagtcttc	ttaaatcatc	120
ttttaattcc	aacaatatga	cattcacaaa	cttatctatg	atttttttaa	aaaaaaattc	180
acacgtgtgc	tcaattttatg	tttcttttag	ttcttccacg	tgattttgatg	caagaaaaat	240
gattagactg	tatgttaaaa	agcatactag	agaaattaat	tataaaacat	caatcagttg	300
aagtaattat	caaaaccgca	tgctttttta	gctaaatctg	tgattgtact	gacgcagatg	360
cataaattca	aacgcaaacy	ctgatctcta	cattagccaa	acaagaatag	cgtccaaatt	420
tacgactggg	ttcacgtgca	ccaaaccgta	gggtataata	tctctctctc	actctccaac	480
atccccactc	ttcccaagaa	acttctataa	ctgcatcagc	ccactctcta	gtctctgact	540
aacgaacttc	cattttcaaa	attcgaattt	ctaatttcta	gtttcaagct	ttcgtacgga	600
gaaaaaatga	aggagatcgc	gatgaggaat	tcaaagcgca	agcctgagcc	gacgccgttc	660
gccgggaaga	agctccgggc	gacgcgatta	cgccggaaga	gagcacagat	ctctcccgtt	720
cttgttcaat	cacctctctg	gagcaaacaa	atcggagtct	ctgctgcttc	tgctcgattcc	780
tgctccgatt	tgctagctga	tgacaacggt	tgactgtggt	cgagcagagt	cgagaagagc	840
tcgaatccga	agaagactct	aattgaagag	gtagaagttt	ctaaacctgg	ttataatgtg	900
aaggagacga	ttggtgattc	gaaatttcga	aggattacga	ggtcttactc	taagctacac	960
aaggagaagg	aggagatga	gatcgaagta	agcgaatcgt	cttgtgttga	ttcgaattct	1020
ggtgctggat	taaggagatt	gaatgtgaag	ggaaataaaa	ttaacgacaa	cgatgagatc	1080
tctttctcac	gatccgatgt	gaccttcgcc	ggacatgtct	ccaacagccg	gagtttgaat	1140
ttcgaatcgg	agaataagga	gagcgacgtc	gtttctgtca	tatctggagt	tgagtactgt	1200
tccaagtctg	ggagcgttac	cggaggagct	gataacgaag	aaattgaaat	ctccaagccg	1260
agcagcttcg	tggaagctga	ttcctctctt	ggatcggcca	aggaattgaa	gccggagctt	1320
gagatagtcg	gatgcgtctc	tgatctcgct	tgctctgaga	aattctcgga	agaggtttctg	1380
gattctctcg	atgatgagtc	atctgagcaa	cgttcagaga	tatattcaca	gtattccgac	1440
ttcgattact	cggattacac	tccgtccatc	ttcttcgact	ctggcagcga	attctctgag	1500
aaatcttctc	ctgattctcc	tatttcacat	tctcgctctc	tgtacctcca	gttcaaggaa	1560
cagttctgta	gatccacgat	tcccaacgat	tttgatctt	cttgcgagga	agaaattcac	1620
tctgaagtaa	gtggtataat	gatttcatat	ctcttggaat	aattgctagt	ggttagagat	1680
tgaagatgta	tgtggttata	tggttgaaat	ttcattcgat	tactagtcta	tttttgatat	1740
gagacttggt	ctgctctgtg	tttgattctg	aaattttggt	ctggaatgaa	tcttaagtat	1800
acattttcgt	tttagttgct	aaggtttgat	gatgaggagg	tggaagagag	ctatctaagg	1860
ctgagggaaa	gagaaagaag	tcatgcatat	atgcgggact	gtgctaaggc	atactgctcc	1920
aggatggaca	atactggtct	catccctcgt	ctacgctcca	tcatggttca	atggattgta	1980
aagggtgaatt	ttaaactttct	gttcaaatgc	atttagttac	atatacattg	atctctgaat	2040
gttgaagctc	agaaatatgt	atcagtagca	gaagattatg	aagtaaatga	atatttggag	2100
atcctgttcc	tggttttaag	aatgttttag	cctaaggaaa	tctatagctt	actttggaat	2160
cttttaaggt	ttatgtatca	gtcagctatg	atattctttg	ttgctgattg	tctgctccct	2220
gattacaagc	agcaatgttc	tgacatgggg	cttcagcaag	agacattggt	tctaggaggt	2280

```

gggtctgttg atcgattcct gagcaaagga tcattcaaaa gcgaaaggac tctaatacta 2340
gtcgggattg cgagctcttac tctggccacc agaattgaag aaaatcaacc ttacaacagg 2400
taccaaccat attccatctt catgattctg acttccaatg ttcattagaa aagtgttctg 2460
agtaggaaaa agattaggac cattacaaga aactgagtat tacgcttaac caaatcaagg 2520
actaataatg gtctaataca aacccttatg gttcaatgaa ttggcatttc atgtgggtat 2580
cgaatattgg attatgtttc tcaaaaacac tctttactgg aaagaacctt ccacaataca 2640
caggaatagt tcaattttct tcaactgctc acctgatact tgctcttttt aactagcatc 2700
cggaaaagga acttcaccat tcagaacctc agatatagcc ggcatgaagt ggtggcaatg 2760
gagtggctgg ttcaagaagt cctcaacttc aaatgcttca caccacaat cttcaacttc 2820
ttgtggtaaa acctctctga ctatatatct tcatgttcca agacacatta tccacacaga 2880
aagatacata tgactatcat ttatacatgt caggtttctac ttaaaagctg ctcgagccaa 2940
tccagaagtt gaaaggaaaag ccaaactcct ggctgttacc tcaactatccg accaaactca 3000
actctgtttt tggccctcaa ctgtagcagc tgcactcgtg gttctcgcct gcacgaaca 3060
caacaaaatc tctgcatacc aacgagtcac aaagggtatca tcagtccctt caataacact 3120
ttaatacctt ttagtatcga gaatatataa gaatcttcac aatcccaaaa cctctctttc 3180
tctccaggtc catgttagaa caacagataa cgagttgcct gaatgcgtta aggtgttttc 3240
agtaacactc tcattatata caaatctcat ttttaccact aaacgtaagg taagtgactg 3300
ttttcacatt ttgtttccct atacaacaga gtctggactg gttgcttggg cagtaagcaa 3360
tcaaaaagaa caaaaaccct aaaaccagga cacagtatac tccgatacca acacacaggt 3420
tatcattact atttcaaaaa acaaacacaa ggtaagtaat aagaactcct ctacagattt 3480
atatacttaa tcgagctgga cttaattagc tottagtata ccaattatta gtgccaccat 3540
ttgtgtcgct catacacatt tatttcttat tttccctaata tcattagact ctcatattct 3600
taaaaaagaat atttccttgt ttgatatttc ctctttatta cgtatgaaag gttttcaatt 3660
tttctaattc tcaactgttc tgatctcaaa tatgaaaaag cttatcaaat ccagcttaaa 3720
aagagagtgt agtcgaattt aactaaagat ttaaaaatgg taatgttttt cttcacacac 3780
gctataggat gcattctcga cggtaatcaa attaaacagt ttgtaaaatg gttaaagcaa 3840
aacatgcttg taaactagag attttttttt cgatcaaaaa ttagagattt atgtatgtaa 3900
caattataga ataaatacta gcatatatgt atgtacgtac ataaaagtca gtctaattct 3960
ctaataaata
3970

```

<210> 5
 <211> 145
 <212> PRT
 <213> Arabidopsis thaliana

```

<400> 5
Met Asp Asn Thr Gly Leu Ile Pro Arg Leu Arg Ser Ile Met Val Gln
1 5 10 15
Trp Ile Val Lys Gln Cys Ser Asp Met Gly Leu Gln Gln Glu Thr Leu
20 25 30
Phe Leu Gly Val Gly Leu Leu Asp Arg Phe Leu Ser Lys Gly Ser Phe
35 40 45
Lys Ser Glu Arg Thr Leu Ile Leu Val Gly Ile Ala Ser Leu Thr Leu
50 55 60
Ala Thr Arg Ile Glu Glu Asn Gln Pro Tyr Asn Ser Ile Arg Lys Arg
65 70 75 80
Asn Phe Thr Ile Gln Asn Leu Arg Tyr Ser Arg His Glu Val Val Ala
85 90 95
Met Glu Trp Leu Val Gln Glu Val Leu Asn Phe Lys Cys Phe Thr Pro
100 105 110
Thr Ile Phe Asn Phe Leu Trp Phe Tyr Leu Lys Ala Ala Arg Ala Asn
115 120 125
Pro Glu Val Glu Arg Lys Ala Lys Ser Leu Ala Val Thr Ser Leu Ser
130 135 140
Asp
145

```

<210> 6
 <211> 143
 <212> PRT

<213> Arabidopsis thaliana

<400> 6

Met	Ala	Gln	Gln	Phe	Asp	Ile	Ser	Asp	Lys	Met	Arg	Ala	Ile	Leu	Ile
1				5					10					15	
Asp	Trp	Leu	Ile	Glu	Val	His	Asp	Lys	Phe	Glu	Leu	Met	Asn	Glu	Thr
		20						25					30		
Leu	Phe	Leu	Thr	Val	Asn	Leu	Ile	Asp	Arg	Phe	Leu	Ser	Lys	Gln	Ala
	35						40					45			
Val	Ala	Arg	Lys	Lys	Leu	Gln	Leu	Val	Gly	Leu	Val	Ala	Leu	Leu	Leu
	50					55					60				
Ala	Cys	Lys	Tyr	Glu	Glu	Val	Ser	Val	Pro	Ile	Val	Glu	Asp	Leu	Val
65					70					75				80	
Val	Ile	Ser	Asp	Lys	Ala	Tyr	Thr	Arg	Thr	Asp	Val	Leu	Glu	Met	Glu
			85						90					95	
Lys	Ile	Met	Leu	Ser	Thr	Leu	Gln	Phe	Asn	Met	Ser	Leu	Pro	Thr	Gln
		100						105					110		
Tyr	Pro	Phe	Leu	Lys	Arg	Phe	Leu	Lys	Ala	Ala	Gln	Ser	Asp	Lys	Lys
		115					120					125			
Leu	Glu	Ile	Leu	Ala	Ser	Phe	Leu	Ile	Glu	Leu	Ala	Leu	Val	Asp	
	130						135					140			

<210> 7

<211> 142

<212> PRT

<213> Arabidopsis thaliana

<400> 7

Met	Gln	Gln	Ile	Asp	Leu	Asn	Glu	Lys	Met	Arg	Ala	Ile	Leu	Ile	Asp
1				5					10					15	
Trp	Leu	Ile	Glu	Val	His	Asp	Lys	Phe	Asp	Leu	Met	Asn	Glu	Thr	Leu
		20						25					30		
Phe	Leu	Thr	Val	Asn	Leu	Ile	Asp	Arg	Phe	Leu	Ser	Lys	Gln	Asn	Val
	35						40					45			
Met	Arg	Lys	Lys	Leu	Gln	Leu	Val	Gly	Leu	Val	Ala	Leu	Leu	Leu	Ala
	50					55					60				
Cys	Lys	Tyr	Glu	Glu	Val	Ser	Val	Pro	Val	Val	Glu	Asp	Leu	Val	Leu
65					70					75				80	
Ile	Ser	Asp	Lys	Ala	Tyr	Thr	Arg	Asn	Asp	Val	Leu	Glu	Met	Glu	Lys
			85						90					95	
Thr	Met	Leu	Ser	Thr	Leu	Gln	Phe	Asn	Ile	Ser	Leu	Pro	Thr	Gln	Tyr
		100						105					110		
Pro	Phe	Leu	Lys	Arg	Phe	Leu	Lys	Ala	Ala	Gln	Ala	Asp	Lys	Lys	Cys
		115					120					125			
Glu	Val	Leu	Ala	Ser	Phe	Leu	Ile	Glu	Leu	Ala	Leu	Val	Glu		
	130						135					140			